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160 SPEAR STREET, SAN FRANCISCO, CALIFORNIA 94105, TEL. 415/777-2811

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International Specialists in the Environment

MEMORANDUM

TO:	Carolyn Douglas, EPA Region IX
FROM:	Chris Lichens, Ecology and Environment, Inc.
DATE:	August 31, 1989
SUBJECT:	Completed Work
cc:	Marcia Brooks, E & E, Inc.
Attached is	the following completed:
PA	PA Review SSI LSI SIRe
Other Fed	eral Facility Preliminary Assessment Review
Site Name:	San Diego Naval Station
EPA ID #: CA	A4170090233
City, County	: San Diego, San Diego
State Recomme	endation:
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International Specialists in the Environment

FEDERAL FACILITY PRELIMINARY ASSESSMENT REVIEW

SUBMITTED TO:

Carolyn Douglas, Federal Facilities Coordinator

EPA Region IX

PREPARED BY:

Lorene Flaming, Ecology and Environment, Inc. \$\mathcal{L}^{\gamma}\$

THROUGH:

Patty Cook, Ecology and Environment, Inc.

DATE:

August 31, 1989

FACILITY:

San Diego Naval Station San Diego, California

TDD#:

F9-8903-002

EPA ID#:

CA4170090233

PROGRAM ACCOUNT#:

FCA1198PAA

FIT REVIEW/CONCURRENCE:

uhenk 8/31/89

cc: FIT Master File Tom Mix, EPA

Julie Anderson, EPA

1. INTRODUCTION

In accordance with Section 120 of the Superfund Amendments and Reauthorization Act of 1986, all federal facilities listed on the Federal Agency Hazardous Waste Compliance Docket were required to submit a Preliminary Assessment (PA) to the U.S. Environmental Protection Agency (EPA) by April 17, 1988. Ecology and Environment, Inc.'s Field Investigation Team (FIT) has been tasked to review the PA submitted by the Naval Energy and Environmental Support Activity for San Diego Naval Station to ensure that an accurate response determination is made.

The strategy for determination of further action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is based solely on each facility's potential to achieve a sufficient score on the Hazard Ranking System (HRS) for inclusion on the National Priorities List (NPL). This strategy is intended to identify those sites posing the highest relative risk to human health or the environment. This facility was evaluated primarily using the original HRS model;

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however, it was also assessed for its potential to score under the proposed revised HRS model. Following is a summary of FIT's findings with regard to this facility.

2. FACILITY DESCRIPTION

San Diego Naval Station (NAVSTA) is located in the tidelands of San Diego Bay and is bordered by the City of San Diego to the north, Interstate Highway 5 to the east, National City to the south, and San Diego Bay to the west. The facility comprises 1,127 acres of land. Land use along the port immediately north and south of the facility is primarily industrial with some commercial use. Beyond the base to the east is a residential area.

The mission of the station is to provide logistical support for the operating forces of the U.S. Navy. As such, it is tasked with providing berthing and port services for all ships under naval control in San Diego, as well as shore-based training.

In 1986 an Initial Assessment Study (IAS) was completed on NAVSTA by SCS Engineering for the Naval Energy and Environmental Support Activity (NEESA) under the direction of the Department of Defense (DOD) Installation Restoration Program. The IAS is roughly equivalent to a CERCLA preliminary assessment; the purpose of the IAS is to identify potential contamination from past hazardous materials operations at DOD facilities.

Based on information gathered during the IAS, six potentially contaminated sites were identified:

- Site 1: Ship Repair Basins,
- Site 2: Mole Pier Disposal Area,
- Site 3: Salvage Yard.
- Site 4: Former Defense Property Disposal Office (DPDO),
- Site 5: Admiral Baker Golf Course, and
- Site 6: Murphy Canyon Housing.

The study concluded that sites 1 through 3 warrant further investigation to assess potential long-term impacts (refer to Figure 1).

This review is based on information provided in the 1986 IAS and 1988 HRS documentation records submitted by NEESA, and includes an assessment of sites 1 through 4 (1,2). Sites 5 and 6 are not considered in this report because they are under a separate authority, Navy Public Works Center, and are located more than 15 miles away. Following is a description of each site.

2.1 Site 1: Ship Repair Basins

Two wet docks at this site were used primarily as ship repair basins from the early 1940s to the end of World War II in 1945 (refer to Figure 2). After the war ended, Navy vessels were decommissioned at Piers 8 through 12. Excess materials from decommissioned ships, including solid waste,

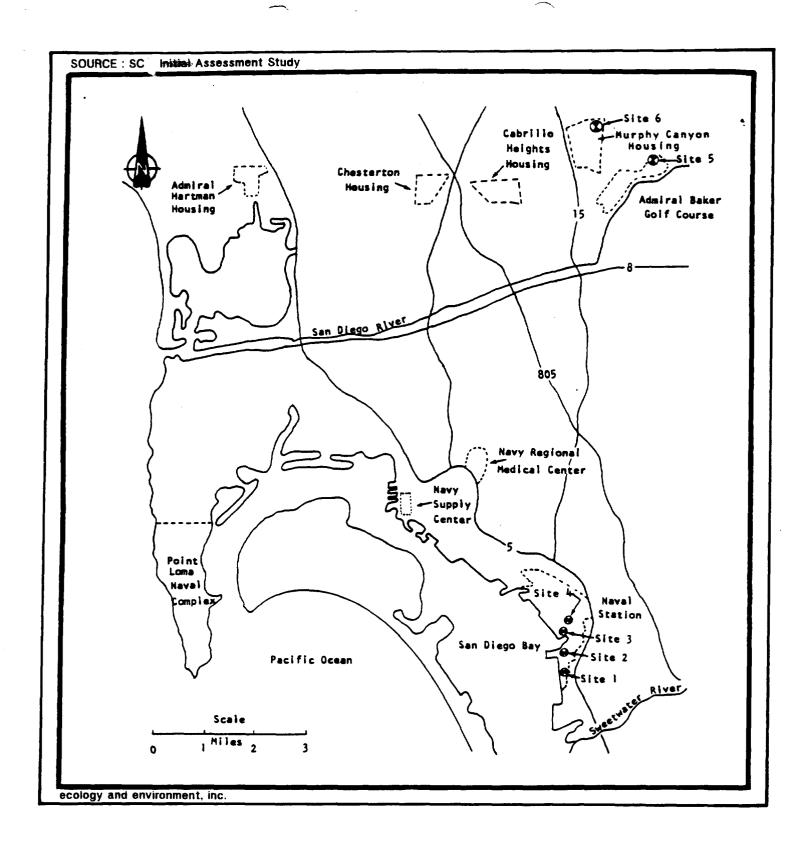


Figure 1 PAST DISPOSAL SITES AT NAVAL STATION AND PUBLIC WORKS CENTER SAN DIEGO, CALIFORNIA

Figure 2 SITE 1, DRY DOCK DISPOSAL AREA

miscellaneous ship supplies, and waste hydraulic fluids were disposed of in the ship repair basins. In addition, potentially contaminated surface runoff from the Salvage Yard (Site 3) and paint sludges have accumulated in the docks (1,2).

In 1972, the wet docks were filled with demolition debris and rubble and paved over. The open ends of the wet docks were sealed off by construction of an 18-inch concrete quay wall. Prior to this time, tidal action regularly flushed floatables and suspended matter from the docks. The wet docks are approximately 25 feet deep and have a total volume of about 2 million cubic feet. Because of the flushing action within the wet docks, the actual amount of waste material disposed of probably exceeds this volume. However, the PA estimated that the total amount of hazardous material disposed of on-site was probably 5,000 gallons (1). Reportedly, a portion of the wastes has been continually submerged despite the quay wall because the base of the wet docks is in groundwater, which is probably hydraullically connected to the bay (1).

2.2 Site 2: Mole Pier Disposal Area

From 1945 to 1972, materials such as creosoted pilings, trees, lumber, refuse, concrete, waste paints, contaminated gasoline, waste POLs (petroleum, oil, and lubricants), unspecified shop wastes, and diesel fuel were disposed of on-site. (Refer to Figure 3). A 1958 map shows that the site was enclosed with earthen berms. Waste piles of refuse and debris were ignited with gasoline or diesel fuel and burned in this area. Beginning in the 1970s, trucks and heavy equipment were routinely cleaned on-site with diesel fuel and immersion by crane into Paleta Creek. It is estimated that approximately 500,000 gallons of petroleum wastes have been spread, sprayed, or buried at this site during its years of operation (1).

Examination of soil borings logged in 1973 for the construction of Building 3224 revealed debris, oil, and strong gaseous odors. Two of the borings showed soils "soaked with oil" at 5 and 9 feet below ground surface. It appears that this soil has not been sampled (1).

2.3 Site 3: Salvage Yard

This facility was used for temporary storage and/or disposal of all excess Navy property between 1943 and 1975. Excess material from other San Diego Naval installations (e.g., Point Loma Naval Complex and Naval Air Station Miramar) were also transported to the salvage yard for incineration, sale to outside bidders, and/or reutilization by other DOD organizations (1). (Refer to Figure 4).

Materials handled by the salvage operation included items such as transformers containing PCB-contaminated oil, mercury, batteries, drummed wastes containing POLs, solvents, and thinners (e.g., methyl ethyl ketone, trichloroethylene, and PD-680 solvent), refuse, demolition debris, and spoiled food items from incoming Navy vessels (1).

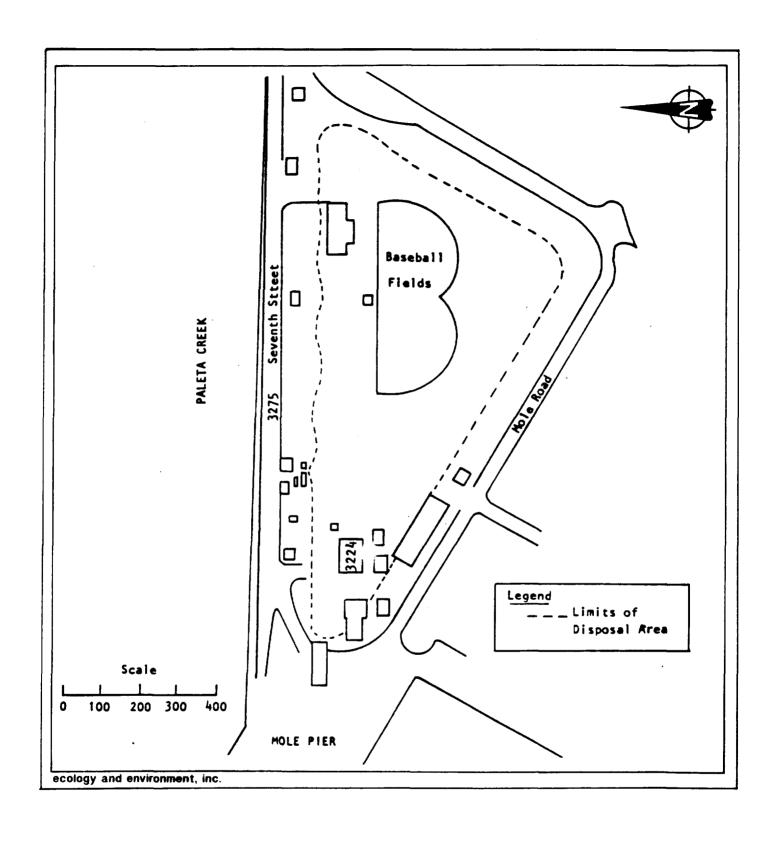


Figure 3 SITE 2, MOLE PIER DISPOSAL AREA

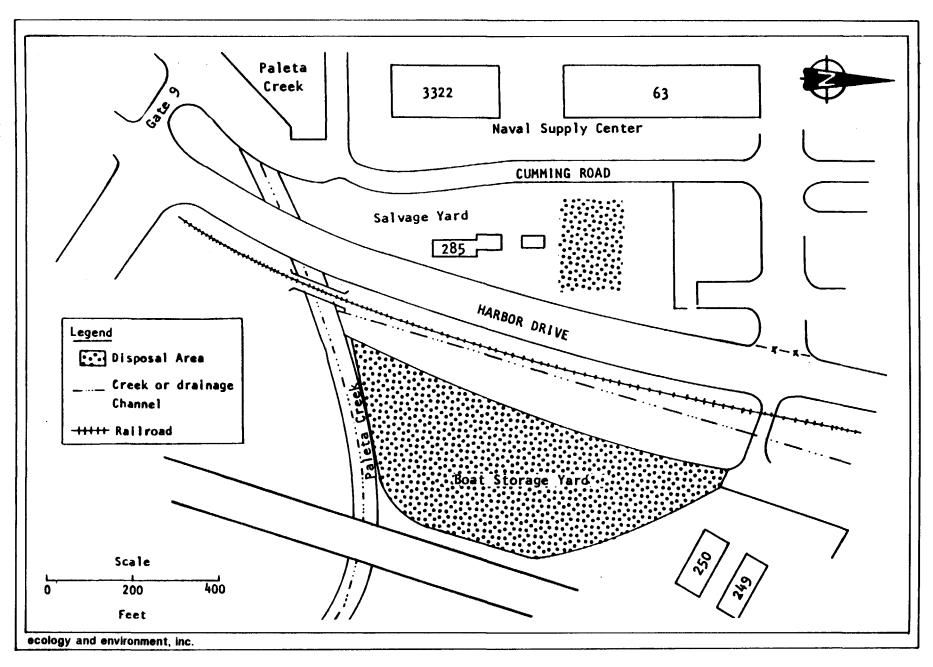


Figure 4 SITE 3, SALVAGE YARD AND SITE 4, BOAT STORAGE YARD

Reportedly, up to one million drums were either stored or disposed of at the salvage yard between 1943 and 1975; however, it is estimated that only 40,000 to 80,000 drums actually contained waste. Approximately 5% of the drums stored on-site were severely corroded and resulted in leakage, often to the point where wastes would saturate the soil and form small pools. Additionally, several wastes were routinely drained onto unpaved ground in this area (1).

The estimated quantities of materials drained or disposed of onto soil on-site are:

- o 15,000 to 110,000 gallons of drummed wastes;
- o 750 to 1,800 pounds of mercury;
- o 7,500 to 15,000 gallons of transformer fluids; and
- o 9,600 to 19,200 gallons of battery acids.

Wastes that could not be sold, reused, or donated were burned in one of two incinerators at the north end of the salvage yard. Ash residues from the incinerators were transported from the station by refuse vehicles for off-site disposal. The incinerators were dismantled and taken out of service in 1968 (1).

In 1976, soil samples were collected from the north end of the salvage yard and analyzed for PCB content. Due to apparent PCB contamination, the top 8 inches of soil were removed from the site and the area was paved with asphalt. The total quantity of soil excavated and the concentrations of PCBs detected were not stated. The IAS indicated that at the time of the removal, cleanup levels had not been established for PCBs and no attempt was made to identify, quantify, or remove other contaminants from the soil (1).

2.4 Site 4: Former Defense Property Disposal Office Storage Yard

Between 1943 and 1975, this open area was used as a storage yard for the Naval Supply Center. In 1975, the yard was converted to a DPDO storage lot. Unused or expired drummed materials were stored on-site until the items could be sold, reissued, or donated. Materials included paints, insulating and lube oils, and PD-680 solvent. According to NAVSTA personnel, no major spills involving hazardous materials ever occurred on-site; however, it is estimated that approximately 35,000 to 75,000 gallons of waste oils containing PCB transformer fluids were spread onto soil as a dust control measure. The site was paved with asphalt in 1975, and is currently used for parking and boat storage. (Refer to Figure 4).

3. HRS FACTORS

3.1 Observed Release

It appears that there has been no sampling of groundwater, surface water, or air to date. The potential for a release to air appears low because all of sites 1 and 4 and most of Site 3 were paved over in the late

1970s, covering the majority of the soil contamination reported on-base. Additionally, the ash residues generated by the incinerators at Site 3 were routinely transported off-base for disposal, and the incinerators were dismantled in 1968. It is unknown if ash residues remain that may be exposed to the air route. It appears that a potential exists for an observed release to groundwater and surface water because the waste quantity is large, depth to groundwater is only 10 feet, and wastes submerged in the wet docks may have contaminated harbor sediments (1).

3.2 Direct Contact/Fire and Explosion

There appears to be little threat of direct contact at the facility because most of the contaminated areas are reportedly paved over. If contaminants have migrated to San Diego Bay, a potential exists for swimmers to come into contact with hazardous substances. However, the bayside areas surrounding NAVSTA are primarily industrial so it is unlikely that there is much recreational use in this portion of the bay. No evidence was provided in the IAS to suggest that there is a threat of fire or explosion (1).

3.3 Waste Type/Quantity

Reportedly, the following wastes have been disposed of on-base: 5,000 gallons of hazardous materials at Site 1; 500,000 gallons of petroleum wastes at Site 2; 15,000 to 100,000 gallons of drummed hazardous materials at Site 3; and 35,000 to 75,000 gallons of petroleum wastes at Site 4. Hazardous materials included creosoted pilings, waste POLs, methy ethyl ketone, tricloroethylene, and paints. Additionally, 750 to 1,800 pounds of mercury, 9,600 to 19,200 gallons of battery acids, and 7,500 to 15,000 gallons of dielectric fluids were deposited at Site 3. These quantities reflect estimates of the amount of waste disharged directly to soil or the wet docks on-base (1).

Many of the petroleum wastes were contaminated with PCBs. Although refined crude oil and petroleum fractions are exempt under the CERCLA Petroleum Exclusion, the PCBs and any other contaminants that might be present are not exempt [CERCLA 101(14) and 104(a)(2)]. For further information regarding the hazardous materials disposed of at NAVSTA, refer to Appendix B.

3.4 Groundwater

There have been no samples collected to document a release to groundwater from NAVSTA; however, a potential exists for an observed release at this facility. The western portion of the base is built wholly on 8 to 14 feet of permeable artificial fill, comprised of sandy clay to sand with shells and/or gravel. Alluvial deposits and slopewash composed of soft muds to sands and gravel underlie the artificial fill to depths of 40 feet at the waterfront. The IAS estimated that the hydraulic conductivities of the artificial fill and alluvial deposits range from 10^{-5} to 10^{-1} cm/sec (1).

Depth to groundwater at NAVSTA is approximately 10 feet. Reportedly, this water table aquifer is in hydraulic continuity with the Bay Point

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and San Diego Formations, which are used for drinking water in the County of San Diego (2,3). The depths of these formations are unknown, but their thicknesses are 50 feet and 1,400 feet, respectively (1). The nearest drinking water wells are located within 1.5 miles of Site 3 and two miles of sites 1, 2, and 4 (4,5). Water from these wells is blended in a grid system that serves approximately 54,700 people. These wells are owned by the Sweetwater Authority (5). The net seasonal precipitation (i.e., May to November) is -30 inches (6).

3.5 Surface Water

There have been no samples collected to document surface water contamination by NAVSTA. However, the potential for an observed release to surface water is high. Hazardous materials disposed of in the wet docks at Site 1 were in direct contact with the San Diego Bay prior to 1972 when the quay wall was constructed. Wastes at the bottom of the docks are currently submerged in groundwater which is hydraullically connected to the bay, so a potential exists for harbor sediments to be contaminated (1).

Additionally, from the late 1940s to 1972, unburned fuel and quench waters generated from fire-fighting training excercises were discharged directly into the bay. The Navy also reports that after the Vietnam War, trucks and heavy equipment were routinely "decontaminated" at Site 2 with diesel fuel and immersion by crane into Paleta Creek, a tributary to the bay (1). The contaminants of concern were not specified. The San Diego Bay is used for recreation, fishing, and commercial shellfish harvesting (7).

3.6 Air

There has been no air sampling associated with NAVSTA. It appears that there is a low potential for a release of contaminants to air because all of the areas of evident soil contamination were reportedly paved over in the late 1970s. The only apparent, possible exception is the location of the former incinerators at the north end of the salvage yard (Site 3). This area may be paved because the incinerators were located in the vicinity of the PCB spill; however, there is no other evidence to suggest that the former incinerator site was paved or that all ash residues were removed (1). If contaminants are exposed to the air route a potential exists for an observed release to air.

4. PROPOSED REVISED HRS CONSIDERATIONS

The Naval Station has several revised model considerations due to its proximity to San Diego Bay. San Diego Bay is considered an estuary, and migration of contaminants into the bay could cause damage to this sensitive environment. The San Diego Bay and surrounding shoreline is home to many marine and terrestrial species including the <u>Pelcanus occidentalis californis</u> (California brown pelican), a federally-designated endangered species [50 CFR 17.11 and 17.12]. San Diego Bay is also a historical feeding and breeding ground of the <u>Eschirchrius rabustus</u> (California gray whale). Although the whales no longer use San Diego Bay, occasionally groups of whales stray into the bay (1).

Approximately one mile south of NAVSTA lies an area of saltwater marshes. Although the plant life indigenous to saltwater marshes in this area is not currently designated as endangered or threathened, salt marshes are considered sensitive environments (9,10). The <u>Reithrodontomys rauientris</u> (Salt Marsh harvest mouse) is both a state and federal endangered species often found in salt marshes. It is not known if this species is living in the salt marshes of San Diego Bay (1).

The marine and tideland areas adjacent to San Diego Bay serve as important habitats for a variety of birds, shellfish, marine mammals, and algae. San Diego Bay is an important spawning area for ocean and bay fishes, and is used for commercial fishing. Therefore, any contaminants which might release into the bay could impact the human food chain (1). Additional uses of the bay include sport fishing, commercial shipping, and recreation (e.g., swimming, boating, and windsurfing) (1).

5. CONCLUSIONS

Naval Station San Diego shows potential for inclusion on the National Priorities List for the following reasons:

- Large quantities of hazardous materials were discharged directly to soil on-site for several decades;
- o The depth to groundwater is only 10 feet;
- o The water table is hydraullically connected to the aguifer of concern;
- o The potential groundwater target population is large (54,700);
- o Distance to the nearest drinking water well is less than 1.5 miles:
- o Wastes on-site have been in direct contact with San Diego Bay for several years; and
- o The bay is used for commercial fishing and is the habitat of at least one endangered species.

6. EPA RECOMMENDATION

	<u>Initial</u>	<u>Date</u>
No Further Remedial Action Planned		
High-Priority Screening Site Inspection	_ejd_	9/5/89
Medium-Priority Screening Site Inspection	<i>,</i>	
Notes:		

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- 3. Leighton and Associates, Assessment of Soil and Groundwater Conditions at the Proposed Cold Storage Facility, Proposed Classified Materials Building Site, and the 32nd Street Naval Station, San Diego, 1986.
- 4. Sorenson, Al, Sweetwater Authority, and Scott Logan, IT Corporation, telephone conversation, February 29, 1988.
- 5. Reynolds, Dick, Sweetwater Authority, and Scott Logan, IT Corporation, telephone conversation, April 5, 1988.
- 6. U.S. Department of Commerce, <u>The Climatic Atlas of the United States</u>, Environmental Science Service Administration, <u>Environmental Data Service</u>, June 1968.
- 7. California Department of Fish and Game, <u>The Natural Resources of San Diego Bay: Their Status and Future</u>, Coastal Wetland Series #5, 1973.
- 8. McGrart, Jim, California Coastal Commission, and Mike Sturdevant, IT Corporation, telephone conversation, April 8, 1988.
- 9. Faber, Phyllis, Common Wetland Plants of Coastal California, Pickleweed Press, 1982.
- 10. Yensu, Edward, and Prflipps, <u>Endangered and Threatened Plants of</u>
 The United States, Smithsonian Institution, 1978.
- 11. California Department of Fish and Game, List of State Federal Endangered and Threatened Animals of California, April 1, 1988.

APPENDIX A FURTHER INFORMATION NEEDS

Further information is needed to adequately address the potential for a release to groundwater, surface water, air, and the threat of direct contact. All proprosed, revised Hazard Ranking System criteria for these four pathways should be addressed.

APPENDIX B

Waste Quantity Tables from the 1986 Initial Assessment Study Conducted on Naval Station, San Diego

Table 8-2

Shop Hazardous Wastes Disposed at Site 2,
Mole Pier Area, NAVSTA San Diego, California*

Waste	Source of Waste	Time Period	Estimated Total Quantity
Motor oils, diesel fuel, gasoline,	NAVSTA vehicle maintenance	1945-1963	400,000 gallons
hydraulic fluid	NRF	1945-1964	140,000 gallons
Stoddard solvent	NAVSTA vehicle maintenance	1945-1963	2,800 gallons
	DATC	1967-1972	1,000 gallons
Mixed solvents	NRF	1945-1964	6,000 gallons
(acetone, MEK, toluene, methylene chloride)	PWC	1967-1970	1,000 gallons
Mineral spirits	PWC	1967-1970	18,000 gallons
Carbon remover (phenol, cresol, chlorinated hydro-	NAVSTA vehicle maintenance	1945-1963	500 gallons
carbons)	DATC	1967-1972	4,000 gallons
Methylene chloride	DATC	1967-1972	2,400 gallons
Chlorinated solvents,	DATC	1967-1972	1,000 gallons
unidentified	NRF	1945-1964	20,000 gallons
Sandblast grit	SIMA	1950-1965	320,000 pounds
	PWC	1963-1972	2,700,000 pounds

^{*} These wastes have been burned or buried.

Table 8-3
Wastes Disposed at Site 3, Salvage Yard

Waste	Source of Waste	Time Period	Estimated Total Quantity
Dielectric fluids	Electrical shops (all San Diego naval facilities)	1943-1975	7,500-15,000 gallons
Mercury	Torpedoes, compasses, ballast tanks	1943-1975	750-1,800 pounds
Waste oils, solvents, thinners (including PD-680, trichloro-ethylene, alcohols, MEK, carbon tetra-chloride)	All San Diego naval facilities	1943-1975	15,000-110,000 gallons
Battery acids	Transportation (all San Diego naval facilities)	1943-1975	Unknown
Silver nitrate	Photo processing	1943-1975	Unknown

Table 5-1
Past Waste Generation by Naval Station San Diego, California, Maintenance Operations

Waste Type	Source	Period of Generation	Generation Rate	Treatment or Disposal Method
Lubricating Oils	Vehicle Maintenance	1945-1963	20,000 gallons/year	Site 2, Mole Pier Disposal Area
		1963-present	20,000 gallons/year	Contract Disposal Off-Base
	Auto Hobby Shop	1945-present	7,800 gallons/year	Contract Disposal Off-Base
	Small Craft Repair	1941-present	60 gallons/year	Station Waste Oil Recovery
	Maintenance School	1970-1983	100 gallons/year	Storm Drain to San Diego Bay
		1983-present	100 gallons/year	Collected by PWC for Off-Base Disposal
Fuels (Diesel, Gasoline)	Vehicle Maintenance	1945-1963	500 gallons/year	Site 2, Mole Pier Disposal Area
dasorrine		1963-present	500 gallons/year	Contract Disposal Off-Base
Stoddard Solvent	Vehicle Maintenance	1945-1963	300 gallons/year	Site 2, Mole Pier Disposal Area and Site 3, Salvage Yard
		1963-present	300 gallons/year	Collected by PWC for Off-Base Disposal
	_Auto Hobby Shop	1945-1975	600 gallons/year	Discharge to San Diego Bay
		1975-present	600 gallons/year	Contract Disposal Off-Base
Carbon Remover (Phenol, Cresol,	Vehicle Maintenance	1945-1963	55 gallons/year	Site 2, Mole Pier Disposal Area and Site 3, Salvage Yard
Chlorinated Hydrocarbons)		1963-present	55 gallons/year	Collected by PWC for Off-Base Disposal

Table 5-1 (continued)

Waste Type	Source	Period of Generation	Generation Rate	Treatment or Disposal Method
Alkaline De- greasers (Sodium	Vehicle Maintenance	1945-present	200 gallons/year	Sanitary Sewer
Hydroxide)	Auto Hobby Shop	1945-present	250 gallons/year	Sanitary Sewer
Mineral Spirits	Small Craft Repair	1941-1965	500 gallons/year	Discharge to Chollas Channel and San Diego Bay
		1965-present	500 gallons/year	Contract Disposal Off-Base
Waste Paint/ Thinners	Brig Maintenance Workshop	1948-present	120-150 gallons/year	Collected by PWC for Off-Base Disposal
Photographic Developer	Audiovisual	1942-present	500 gallons/year	Sanitary Sewer
Photographic Fixer	Audiovisual	1942-1975	250 gallons/year	Sanitary Sewer (No Silver Recovery)
		1975-present	250 gallons/year	Sanitary Sewer (Silver Recov- ery)
1				

Table 5-3

Past Waste Generation by Ship Repair Operations at Naval Station San Diego, California

Waste Type	Source	Period of Generation	Generation Rate	Treatment or Disposal Method
Lubricating Oils	SIMA Machine and Engine Shops	1980-present	2,000 gallons/year	Collected by PWC and Taken to Waste Oil Recovery Facility
	DATC Machine and Engine Shops	1975-1980	4,000 gallons/year	Collected by PWC and Taken to Waste Oil Recovery Facility
		1967-1975	5,000 gallons/year	Contract Disposal Off-Base
Machine Cooling Oils	SIMA Machine Shops	1980-present	15,000 gallons/year	Collected by PWC and Taken to Waste Oil Recovery Facility
	DATC Machine Shops	1967-1975	15,000 gallons/year	Contract Disposal Off-Site
Hydraulic Fluids	SIMA Machine, Hy- draulic, and Engine Shops	1980-present	150 gallons/year	Collected by PWC and Taken to Waste Oil Recovery Facility
	DATC Machine and Engine Shops	1967-1980	250 gallons/year	Contract Disposal Off-Base
Lubricating Oils, Diesel Fuel, Gaso- line, Hydraulic Fluids, Machine Cooling Oils	NRF Operations	1945-1964	10,000 gallons/year	Site 2, Mole Pier Disposal Area, or Site 3, Salvage Yard; Small Quantities to Site 1, Ship Repair Basins, or direct discharge to San Diego Bay
1,1,1-Trichloro- ethane	SIMA Electrical Repair Group and Metal Buildup Shop	1980-present	900 gallons/year	Collected by PWC for Disposal Off-Base

Table 5-3 (continued)

Waste Type	Source	Period of Generation	Generation Rate	Treatment or Disposal Method
Methylene Chloride	SIMA Antenna and Engine Shops	1980-present	750 gallons/year	Collected by PWC for Disposal Off-Base
	DATC AC & R, Antenna, and Engine Shops	1967-1980	2,130 gallons/year	Contract Disposal Off-Base
Trichloroethylene	SIMA Electrical Repair Group	1980-present	120 gallons/year	Collected by PWC for Disposal Off-Base
Chlorinated Solvents,	SIMA, Various Shops	1980-present	350 gallons/year	Collected by PWC for Disposal Off-Base
Unspecified	DATC, Various Shops	1967-1980	320 gallons/year	Contract Disposal Off-Base
	NRF Operations	1945-1964	2,000 gallons/year	Site 2, Mole Pier Disposal Area, or Site 3, Salvage Yard
Stoddard Solvent	SIMA Pattern, Ma- chine, and Engine Shops; Electrical Repair Group	1980-present	110 gallons/year	Collected by PWC for Disposal Off-Base
	DATC Engine Shop	1967-1980	500 gallons/year	Contract Disposal Off-Base
Isopropanol	SIMA Pattern Shop	1980-present	110 gallons/year	Collected by PWC for Disposal Off-Base
Toluene	SIMA Pattern Shop	1980-present	10 gallons/year	Collected by PWC for Disposal Off-Base